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AUTHOR	Anderson, James A.
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ABSTRACT

To provide information concerning projected operating characteristics of public television stations, this report summarizes and presents the conclusions of a much larger report based on questionnaires sent to public television licencees. It deals with scheduling, program needs, production costs, broadcast costs, funding mix, and other costs. Present characteristics and projections into the near future lead to the conclusion that the diversity of purposes of public television stations leads to competition among the purposes and programs rather than integrated planned overall development. (Author/RH)

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ETS

Public Television Station
Projected Operations and Costs

Broadcast Research Center, Ohio University
March, 1973

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PROJECTED STATION OPERATIONS AND COSTS

Presley D. Holmes

ETS/NAEB

Washington, D.C.

based on

A Study of Educational Public Television Stations

Conducted on behalf of the National Association of Educational Broadcasters Educational Television Stations by the

BROADCAST RESEARCH CENTER

James A. Anderson, Director

Ohio University

March, 1973

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INTRODUCTION

Throughout public television's history, considerable emphasis has been placed on programming studies. Questionnaires relating to what programming services should be offered, the quality and effectiveness of such services, and associated matters have abounded. While programming has taken the survey spotlight, basic issues relating to facilities, personnel, operating costs, especially for local production, program source mix, and optimum hours of operation for the individual station have continued to be the foundation upon which a programming service will stand or fall. Basic information previously supplied by each licensee, for the most part, has concentrated on a recounting of facts from prior years.

Good programming, to state the obvious, requires adequate funding; likewise, adequate funding requires a good understanding of the total public television operation, not just the end product visible on the screen. The study reported here helps give dimension to that picture by providing information for the future concerning <u>projected</u> operating characteristics, based on actual station experience, and the resultant costs of these operations.

To provide this information, the National Association of Educational Broadcasters, Educational Television Stations' Division (ETS), developed a questionnaire in consultation with and for distribution to its members, which sought information on operational time schedules, program needs and costs for local production, program and local broadcast costs, including personnel, operational, and capital equipment costs, and an optimal funding mix. Following the development of the questionnaire, the project was turned over to Ohio University's Broadcast Research Center for preparation, distribution, and analysis. The detailed report of the Broadcast Research Center's procedures, analyses, and interpretations are contained in "A Study of Educational Public Television Stations", January 1973. (Copies available upon request.) This paper treats the results and conclusions from that report and offers selected projections based on an analysis of the full report.

It is appropriate and important to be sure that the following material is set in the proper perspective. To quote from the questionnaire materials sent to each ETS member:

> The magnitude of the task, not the compilation and analyses of the resulting information which is a tremendous job in and of itself, but the time and effort required on your part to throughly and accurately make the necessary plans and calculations is monumental. Very few stations, even recognizing the vital essential need for such information, have enough personnel or hours in the day to devote to this matter.
>
> Therefore, enclosed are two questionnaires, or a "short" form and not fully detailed "long" form. We're asking you to complete only the short form, realizing that it will provide solid information but not the kind of in-depth detail necessary. For example, the "long" form calls for a year-by-year progression and development of costs and goals through 1980; the "short" form asks only for a single "optimum" operational mode targeted at FY 1976. The results of this short form will help us to fully develop the long form, and provide very useful information upon which much-needed general projections can be made.

In the time-honored caveat of the researchers, then, more was found out about what is not known and what needs to be done than in determining irrefutable statements of costs and needs, to say nothing of quality and effects. This study represents just a necessary and valuable start in getting at the precise data required to make plans for the future development of public television. It is certain to be useful not only for discussion purposes, but also to help design the needed follow-up detailed surveys. It is the latest word, but not the last word.

James A. Anderson
Presley D. Holmes

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HIGHLIGHTS

- Average "full service" schedule - 1976

  48 weeks, 7 days/week, 16 hours/day

- Program source mix - average

  Local production - 26½ hours/week
  Tape/film - 50 hours/week
  "Real time" interconnection - 49 hours/week

- Local production needs, hours/week

Classroom instruction	8.7	Children's	2.7
Public Affairs	4.2	In Service	1.8
Non-classroom instruction	3.5	Newscasts	1.4
Cultural	3.0	Other	1.3

- Local production costs - average

Remote coverage - current events	$ 3,700 per hour
32-program school course	1,800 per program
Social issue documentary	12,000 per program
In studio - public access	1,000 per hour

- Optimal Funding Mix - Over All Respondents

	%	Federal	State/Local	Private
Regular Operation Costs		32.5	44.0	23.5
First-Time Capital Costs		63.0	23.8	13.2
Replacement		40.2	35.2	24.6

PROJECTED STATION

OPERATIONS AND COSTS

SUMMARY RESULTS

The following are selected findings from a late 1972 survey conducted on operational characteristics and costs of public broadcast television stations. The survey questionnaire was completed by 62 of 133 licensees of operational television stations. As can be seen from Table 1, the distribution of responding stations appears well within expectations.

TABLE 1

	Categories			
Licensee Type (Ownership)	University	Community	School	State
Total licensees	35%	36%	14%	15%
Returns from	26%	34%	18%	22%
Service Area (Market Size)	1-25	26-100	101 and above	
Returns from	21%	37%	42%	

The questionnaire was composed of six parts: 1) Operational Time Schedules 1971, 1972, 1976; 2) Program Needs for Local Production, 1976; 3) Program Production Costs; 4) Local Broadcast Costs 1972, 1976; 5) Optimal Funding Mix (from federal, state/local tax, and private funds); and 6) Personnel, Capital Equipment, and Depreciation Costs, 1971, 1972, 1976.

Analysis of the questionnaire data on the above criterion variables was conducted over all respondents and over the control variables. The control variables were Licensee Type(ownership), Service Area (market size), Total Operational Budget, Available Facilities, Operational Service Time, and Hours of Local Production. These analyses were directed toward identifying facts relevant to the funding requirements of public television stations. A summary of selected highlights of those findings follows, using 16 of the 38 tables from the full report, which also included appropriate range and percent of change scores.

SECTION ONE: OPERATIONAL TIME SCHEDULES 1971, 1972, 1976

Stations were asked to project what for them would be a "full service" operation. There are many stations which have or have had a reduced broadcast schedule during the summer months and/or on weekends, thus operating virtually year round, but not on a "full service" schedule in terms of hours per day. days per week, or weeks per year.

Operational Time Schedules 1971, 1972, 1976 - Over All Respondents

Table 2 presents the mean scores for each of the values relating to full service operation for 1971, 1972, and 1976. Inspection of the table shows a steady increase in almost all categories of broadcast service from 1971 to 1972 and projections of even greater increases in 1976. According to figures supplied by the Corporation for Public Broadcasting (CPB) for 1971, and those supplied by the responding stations for 1972, Public Broadcasting increased one month of reduced schedule to full service in 1972. Stations' projections for 1976 show a 12-week increase of full service over 1971.

In 1976, full service is to be provided, with few exceptions, 48 weeks per year, every day of the week, 16 hours per day.

Local, Tape/Film, Interconnection

The largest increase in terms of percentages within these service times will occur in the local production category: the 1976 projection is 175 per cent of the 1972 value. Total real time interconnect increases by 34 per cent for 1976, with the greatest percentage increase (291 per cent) occuring in the regional interconnect category; national real time interconnection increases 11 per cent. Tape/film hours will increase by 100 per cent. The programming mix projections, then, for 1976 move toward balance among the major categories of program services--local, tape/film, and real time interconnections.

TABLE 2

All Respondents

Full Schedule Operation Times:	Mean Averages	1971	1972	1976
(1) Number of Weeks per Year		35.80	40.28	47.92
(2) Number of Days per Week		6.13	6.27	6.93
(3) Number of Broadcast Hours per Day		12.65	12.78	15.82
(4) Hours of Local Production per Day		2.76	2.55	4.09
(5) Total Tape or Film Hours per Day		5.13	5.83	7.26
(6) Hours Local Production Repeats per Day		*****	*****	1.77
(7) Hours Interconnect Delay per Day		*****	*****	2.44
(8) Hours from Library Syndication per Day		*****	*****	2.84
(9) Total Interconnect Hours per Day - Real Time		5.23	6.01	7.01
(10) Regional Interconnect Hours per Day - Real Time		0.72	1.07	1.53
(11) National Interconnect Hours per Day - Real Time		3.48	4.23	4.28
(12) Other Interconnect Hours per Day - Real Time		0.91	0.59	1.00

* No data

Projected Weekend Service for 1976

Those stations reporting that their weekend broadcast service would be substantially different from their weekday service project fewer total broadcast hours for Saturday and Sunday, and a substantial increase in the use of real time network programming sources, compared to weekday operations.

Operational Time Schedules 1972, 1976 - Over Ownership

Table 3 presents the mean scores for each variable and each licensee type (ownership group) for 1972 and 1976.

The number of weeks of full service per year is approximately the same for the four groups in 1972. In 1976, however, the Community and State licensee groups project greater increases than the more academic-bound University and School System stations--offering an average of 49 weeks of service as opposed to 46 weeks.

The number of days per week for 1976 is stable, as would be expected, although some School System stations reflect the pattern of a five-day week. With the exception of these School System stations, all others project the seven-day week as optimum for 1976.

Hours of local production show substantial differences among the four ownership groups. University stations report and project the fewest number of local production hours, while School System stations, indicate the largest.

Total real time interconnect use will rise for all four groups. Regional and other interconnections account for most of that increase. The shifts in programming source mix highlight some of the more interesting differences among the groups.

University and Community stations will decrease (in terms of total time) the national interconnect real time and tape/film playback, increase the importance of local production, and allow more time for regional sources.

School System stations will maintain the relative importance of local production (actual time increases), increase tape/film sources, decrease use of real time national interconnect, and open more time for regional networking.

State licensees will increase local production and

TABLE 3

Licensee Type (Ownership)

Full Schedule Operation Times: 1972 & 1976		Mean Average	University	Community	School Dist.	State Licen.
(1) Number of weeks per Year	1972		40.56	41.20	39.64	38.96
	1976		46.31	49.50	46.73	48.43
(2) Number of Days per Week	1972		6.31	6.58	5.77	6.17
	1976		7.00	7.00	6.64	7.00
(3) Number of Broadcast Hours per Day	1972		12.59	13.33	12.04	12.75
	1976		15.25	16.52	14.70	16.25
(4) Hours of Local Production	1972		1.37	2.66	3.82	2.92
	1976		3.06	4.35	5.40	4.02
(5) Total Tape or Film Hours per Day	1972		6.44	6.06	3.36	6.75
	1976		7.47	7.18	5.30	8.60
(6) Hours Local Production Repeats per Day	1972		*****	*****	*****	*****
	1976		.95	1.76	2.14	2.41
(7) Hours Interconnect Delay per Day	1972		*****	*****	*****	*****
	1976		2.88	2.30	1.93	2.45
(8) Hours from Syndication/ Library per Day	1972		*****	*****	*****	*****
	1976		3.58	1.98	2.14	3.48
(9) Total Interconnect Hours per Day - Real Time	1972		5.78	6.90	5.21	5.68
	1976		7.11	8.03	6.55	5.92
(10) Regional Interconnect Hours - Real Time	1972		0.77	1.70	0.07	1.35
	1976		1.41	2.06	1.19	1.23
(11) National Interconnect Hours per Day - Real Time	1972		4.20	4.28	4.05	4.34
	1976		4.48	4.50	4.20	3.87
(12) Other Interconnect Hours per Day - Real Time	1972		0.80	0.51	1.08	0.00
	1976		1.22	1.23	1.16	0.40

tape/film sources, decrease the use of real time national interconnect, and maintain the present importance of regional networking. Comparisions were not possible for local production repeats, interconnect delay and library syndication since no information was available for 1972.

In brief, then, operational time schedule analyses by licensee types on projections of program source mix show movement toward a greater balance among local production (with the greatest increase), tape/film play, and real time interconnection (with the smallest increase). These projections are seen as a move toward localized programming.

Operational Time Schedules - Service Area (Market Size)

In the operational time schedule analyses, by market size, the major market stations project, generally, a 52 week, 7 day per week, 16 hours per day, full broadcast schedule, consistantly higher than medium or small markets.

Operational Time Schedules - Operational Budget

In the operational time schedule by total operational budget, stations in the highest budget category display programming characteristics which suggest a different class of operation from all other stations. These stations report and project a greater local and regional programming approach with less emphasis on national network services than all other stations. This result, in turn, suggests that there is a critical funding point where a localized programming service becomes viable. The projected 1976 figures show that where the sum of local production, local production repeats, and syndicated programming is compared with the sum of all real time network-supplied programming, the ratio for high-budgeted stations is 55/45. The average for the three lower budget categories is exactly reversed at 45/55. Put another way, then, there appears to be a critical funding point short of which incremental increases in funding will not result in incremental increases in localized programming. For some stations, the funding increment needed to produce any measurable change in localized programming will be moderate; but for others, massive.

SECTION TWO: LOCAL PROGRAM NEEDS, 1976

In this section, respondents were asked to consider the needs of their audiences in regard to seven categories of programming: public affairs, non-classroom instructional, cultural, newscasts, classroom instructional, children's, and in-service. Space for other program needs was also provided.

Local Program Needs, 1976 - Over All Respondents

Table 4 provides each program category, the mean number of hours per week projected for 1976, examples of programs within each type and the number of mentions each example received from the total respondent group. As can be seen, classroom instruction is far and away the leader in terms of time commitments. That category is followed at some distance by the categories of public affairs, non-classroom instructional, cultural, and children's programming. Lowest in time demands are professional in-service, local newscast, and other. While the time estimates are liberal--demanding some five hours of local program production per day in a six day week--the relative values can be reasonably taken as expressive of the role public television sees itself playing in the local community. The role varies substantially according to the ownership control variable, and is affected by the service area size.

Local Program Needs, 1976 - Over Ownership

Table 5 presents each program category, the mean number of hours per week projected for 1976 for each ownership group. In five of the program categories, the hours projected are approximately the same among the four groups. There are, however, some differences among the groups in the non-classroom instructional category, substantial differences in the children's programming, and very large differences in the classroom instructional category. Non-classroom instructional programming shows State licensees projecting considerably more hours than the other three groups, and University stations projecting considerably less. University stations also project fewer hours of children's programming, and substantially fewer hours of classroom instructional time.

The total number of hours projected for 1976 varies notably for the four licensee types. University stations project 16.5 hours of local program production within these categories per week. Community stations project almost ten hours more at 26 hours. School System stations with a

TABLE 4

Category & Program Examples	Frequency Of Selection	Hours Per Week
Public Affairs		4.21
City or County Governmental Meetings	28	
Local Community Affairs	27	
General Governmental Coverage	27	
Documentary	19	
Public Forum	18	
School Board Meetings	13	
Minority Programs	7	
Special Events	6	
Other	19	
Instructional (Non-Classroom)		3.48
How-To-Do-It	34	
Courses	22	
Personal Improvement	18	
Home and Family	17	
Adult Basic Education	15	
Vocational Training	10	
Programs Aged and Handicapped	8	
High School Equivalency	6	
Other	8	
Cultural		2.98
Symphony and Music Concerts	53	
Drama	49	
Art Programs	22	
Dance	11	
Museums and Zoos	8	
Minority Group Cultural Program	7	
Other	10	
Newscasts		1.39
(Locally Produced)		

TABLE 4 - continued

Category & Program Examples	Frequency Of Selection	Hours Per Week
Classroom Instructional		8.71
Science	26	
History and Social Studies	20	
Art and Music	15	
Enrichment	11	
Math	10	
Language Arts	6	
Psychology	5	
Vocational	4	
Special Ed	2	
As Contracted	17	
Other	8	
Children's Programs		2.74
Art, Music, and Theatre	22	
Syndicated Programs	15	
Entertainment	13	
Documentaries for Children	13	
Instructional/Informational	8	
Other	3	
Professional and In-Service		1.76
Medical, Nursing, Paramedical	44	
Management Training	21	
Teacher Training	20	
Professional Training	13	
Vocational	8	
Home and Consumer	5	
Other	12	
Other		1.35
Programs for Specialized Groups	15	
Sports	13	
Specials on Various Topics	11	
Public Affairs/Public Access	9	
Vocational/Hobby	9	
Other	6	

Table 4-Program categories, mean number of hours per week for each category, program examples for each category, and the frequency of selection for each program example.

TABLE 5

Ownership	Mean Average			
Local Production Needs: 1976	University	Community	School Dist.	State Licen.
(1) Hours: Public Affairs	4.44	5.01	3.23	3.50
(2) Hours: Instructional	2.01	3.50	3.23	5.32
(3) Hours: Cultural	2.50	3.31	2.00	3.82
(4) Hours: Newscasts	1.55	1.31	1.45	1.27
(5) Hours: Classroom Instruction	2.47	7.40	13.73	13.86
(6) Hours: Children's	1.28	2.31	3.86	4.18
(7) Hours: In Service	1.44	1.71	2.60	2.43
(8) Hours: Other	0.81	1.50	1.27	1.80
Total Hours/Week	16.50	26.05	31.37	36.18

heavy classroom instructional load reach 31.4 hours per week. State licensees with heavy loads in both classroom and non-classroom instructional categories project 36.2 hours of local program production per week.

(It should be noted that this survey dealt with broadcast only operations and did not seek information on closed-circuit or other non-broadcast activities.)

The weekly total of local production by service area shows major market stations projecting 45 hours, the total for medium market stations is 25, and the small market stations total is 20 hours.

SECTION THREE: LOCAL PROGRAM COSTS: FIXED, VARIABLE, AND TOTAL

In this section of the questionnaire, respondents were asked to calculate the fixed and variable costs for four exemplary programs. Those programs were a current events' remote coverage, a 32-program school course, a social issues' documentary, and a public access in-studio origination. Respondents were instructed to calculate the cost on the basis of the programming style required for their area. Estimates of quality and effectiveness were not directly requested.

An hour of public affairs' remote averaged $3,700; a 32-program school course--$1,800 per program; one-half hour social issue documentary--$12,000; a public access service--$1,000.

Local Program Costs: Fixed, Vairable, & Total - Over Ownership

Table 6 presents the mean fixed, variable, and total costs for University, Community, School System, and State licensee, and shows some startling differences in the fixed costs' picture among the licensee types. University stations report fixed costs considerably lower than all other groups. The probable cause of this difference is the difficulty in separating out fixed costs attributable to the licensee operation as separate from the larger institution. It is not unusual for a University station to be sharing building, maintenance, security and even administrative costs with other functions of the University. The fact that the costs are substantially lower than others in the field strongly suggests that their true value is underestimated.

TABLE 6

Ownership	Mean Average			
Local Program Costs: Fixed $	University	Community	School Dist.	State Licen.
(1) Current Events Remote Coverage	583.31	1244.95	2892.70	2912.75
(2) 32 Program School Course	12547.59	22864.70	18604.50	45086.35
(3) Social Issue Documentary	2475.99	8743.84	1508.36	16566.58
(4) Public Access Service In Studio Production	155.00	401.80	382.11	776.70
Local Program Costs : Variable				
(1) Current Events Remote Coverage	530.81	1163.69	4986.89	2322.80
(2) 32 Program School Course	19437.56	23995.87	11219.45	41320.41
(3) Social Issue Documentary	1542.28	6081.96	1840.64	9292.77
(4) Public Access Service In Studio Production	107.28	330.59	1221.21	1107.74
Local Program Costs: Total				
(1) Current Events Remote Coverage	1114.12	2408.64	7879.58	5235.55
(2) 32 Program School Course	31985.16	46860.57	19823.95	132121.00
(3) Social Issue Documentary	4018.28	14825.81	3349.00	25859.36
(4) Public Access Service In Studio Production	262.28	732.39	1603.32	1884.43

Variable costs approximate the pattern of the fixed costs. University stations generally show much lower variable costs than other licensees; State owners show much higher costs than the other licensees.

Local Program Costs: Fixed, Variable, & Total - Over Market Size

Table 7 presents the fixed, variable, and total cost mean scores for the service area groups. Station market size appears to have its primary effect on the category of the small markets. Stations in these areas consistantly report the lowest costs for fixed and variable categories over all program types. Major and medium sized service areas tend to alternate in having the highest costs. One consistant pattern does occur across all three categories with the social issue documentary, in which the magnitude of both fixed and variable costs is directly related to market size. The larger the market, the greater the cost.

Local Program Costs: Fixed, Variable, & Total - Over Total Operational Budget

The total estimates for the four local program production categories are in an almost perfect direct relationship with total operational budget values. The relationship between total operational budget and the various costs of the programs is determined, in part, because of a greater number of operational costs (more salaries, more departments to support, etc.) which will translate most directly into higher fixed program costs. The relationship of these operational costs with variable program costs, however, is not as clear. Production capacity must clearly play a role in the relationship. Production capacity, as referred to here, means the supportive elements used in program development. It refers to the artwork department, the scene shop, the photographic work, and so on, which are used to enhance the quality of the studio-camera-talent production nucleus. What appears to be demonstrated here is that, as production capacity is increased, the costs of producing increase. The result is that the studios with large production capacity can deliver less product for the same number of dollars. The increase of production capacity, then, without the concomitant increase in production dollars, will not lead to an increase of product. Capacity and subsequent production costs are inextricably interrelated.

TABLE 7

Service Area (Market Size)	Mean Average		
Local Program Costs: Fixed $	Major	Medium	Small
(1) Current Events Remote Coverage	1481.00	3284.67	510.56
(2) 32 Program School Course	39274.74	32571.02	9887.44
(3) Social Issue Documentary	13721.36	11319.53	1270.53
(4) Public Access Service In Studio Production	528.44	624.32	183.29
Local Program Costs: Variable			
(1) Current Events Remote Coverage	1063.04	4165.26	410.96
(2) 32 Program School Course	27904.09	31691.73	16351.96
(3) Social Issue Documentary	11336.55	4617.90	1890.63
(4) Public Access Service In Studio Production	342.12	1151.53	256.44
Local Program Costs: Total			
(1) Current Events Remote Coverage	2544.04	7449.94	921.52
(2) 32 Program School Course	116409.56	64262.74	26239.40
(3) Social Issue Documentary	25057.92	15937.43	3161.17
(4) Public Access Service In Studio Production	870.57	1775.86	439.73

SECTION FOUR: LOCAL BROADCAST COSTS

Respondents were asked to provide current costs and to estimate costs for 1976 for a one-hour operation of the a) transmitter only; b) the transmitter plus interconnect cost; c) the transmitter plus tape playback cost; and d) the transmitter plus film play. Respondents estimate a six-to-nine per cent increase per year in the basic local broadcast costs. The transmitter plus interconnect category represents the higher costs. The result is, in part, influenced by the cost of local or regional interconnections.

Local Broadcast Costs - Over Ownership Groups

Table 8 presents the mean cost value for the 1972 and 1976 broadcast costs over the ownership groups. As with other cost figures, University stations report the lowest cost values. No licensee type consistantly reports the highest values.

Local Broadcast Costs - Over Service Area (Market Size)

Table 9 displays the mean scores for the four broadcast costs and the three market categories for 1972 and 1976. With the exception of the small-market, transmitter-plus-interconnect-cost cell, local broadcast costs are directly related to the size of the market. As service area size increases, broadcast costs increase. Most likely, this relationship is mainly the result of increased labor costs in the more urban areas, but the differences are considerable. Major market costs are reported and projected as double those of the small market.

Costs for 1976 are projected to increase at a more rapid rate for the larger service areas. Consequently, not only do broadcast services cost more in large service areas presently, but large market costs will also increase at a greater rate than is projected to be the case in the smaller markets for the same service.

Local Broadcast Costs - Over Operational Service Time

Operational service time is directly related to local broadcast costs as shown in Table 10. As a greater full service schedule is offered, the costs of one hour of service increase. In addition, these costs are generally projected to increase differentially, with the heavier service groups incurring

TABLE 8

Ownership	Mean Average			
Local Broadcast Costs, $ One Hour: 1972	University	Community	School Dist.	State Licen.
(1) Transmitter Only	61.94	97.39	128.21	99.25
(2) Transmitter Plus Interconnect (Real Time)	75.08	165.07	529.01	143.67
(3) Transmitter Plus Tape Playback	94.33	190.75	184.90	150.05
(4) Transmitter Plus Film Play	76.75	174.32	182.61	134.17
Local Broadcast Costs, One Hour: 1976				
(1) Transmitter Only	76.79	144.16	138.51	155.39
(2) Transmitter Plus Interconnect (Real Time)	140.64	228.64	644.50	199.13
(3) Transmitter Plus Tape Playback	110.50	256.08	166.26	204.73
(4) Transmitter Plus Film Play	92.64	230.67	162.31	186.13

TABLE 9

Service Area (Market Size)	Mean Average		
Local Broadcast Costs, One Hour: 1972 $	Major	Medium	Small
(1) Transmitter Only	161.89	95.61	58.31
(2) Transmitter Plus Interconnect	202.17	137.95	235.27
(3) Transmitter Plus Tape Playback	223.87	154.31	122.87
(4) Transmitter Plus Film Play	204.22	151.57	103.07
Local Broadcast Costs, One Hour: 1976			
(1) Transmitter Only	226.44	123.76	80.45
(2) Transmitter Plus Interconnect	281.62	167.46	307.75
(3) Transmitter Plus Tape Playback	296.18	179.39	150.77
(4) Transmitter Plus Film Play	268.87	161.45	134.36

TABLE 10

Operational Times

Local Broadcast Costs, $ One Hour: 1972	Mean Average Light	Moderate	Heavy
(1) Transmitter Only	66.17	85.41	169.32
(2) Transmitter Plus Interconnect	222.69	130.16	259.86
(3) Transmitter Plus Tape Playback	95.98	136.82	286.69
(4) Transmitter Plus Film Play	81.18	131.87	271.99
Local Broadcast Costs, One Hour: 1976			
(1) Transmitter Only	97.11	109.99	227.66
(2) Transmitter Plus Interconnect	276.18	191.32	330.95
(3) Transmitter Plus Tape Playback	120.23	156.22	371.47
(4) Transmitter Plus Film Play	107.15	141.64	348.11

even more costs in the future. The derivation of this relationship is that, for every increase in service, there is a resultant decrease in the usage potential of each activity-funding dollar. Thus, as stations commit resources toward the projected optimal of 52 weeks per year, 7 days per week, 16 hours per day of full service operation, their ability to provide a broadcast product is curtailed, unless funding related to that product is also increased. As a systems analyst would phrase it, increased funding in the one area is dysfunctional to the other. Such an occurence does not appear to be a corollary to Parkinson's law, i.e., costs increase according to available funding. It is, rather, the effected result of the increased personnel and physical plant necessary for the provision of the greater full-service operation.

In brief, local broadcast costs are projected to increase on the average of 7.5 per cent per year between 1972 and 1976; broadcast costs per hour of service, and the rate of increase of these costs is directly related to market size; and stations providing more operational service time have higher costs per hour of service time.

SECTION FIVE: OPTIMAL FUNDING MIX

The Optimal Funding Mix section requested respondents to indicate the percentages relative to the sources of funding for regular operational costs, first-time capital costs, and replacement (depreciation) costs. Categories for sources of funding were federal, state/local tax monies, and private funds including foundations, revenue for contract services, public memberships and so forth.

Optimal Funding Mix: Over All Respondents

Table 11 gives the mean percentages for the three funding sources, and the three classes of costs over all respondents.

TABLE 11

	Federal	State & Local	Private
Regular Operation Costs	32.52	44.02	23.46
First-Time Capital Costs	62.98	23.79	13.23
Replacement	40.23	35.16	24.61

Table 11 - Mean percentage values for optimal funding mix for regular operation costs, first-time capital cost, and replacement costs from federal, state, local, and private sources over all respondents.

The fact that different funding sources are primary for different cost areas, coupled with the results from the cost analyses in earlier sections of this report raises the issue of orchestration of funding. One can project, for example, that increased funding from federal sources for first-time capital costs must be joined with increased funding from state and local sources for regular operation costs in order for the federal increase to be of full functional value. While superfically this adjustment may seem to be a simple transfer of monies from one category to another, most tax funding is governed by legal restraints, which could result in operational starvation amidst a wealth of capital funds. A systems approach, then, must be taken in such funding recommendations as might be made.

Optimal Funding Mix: Over Ownership

Table 12 presents the mean percentage values for the three funding sources and the four licensee types. Community stations project the most balanced funding mix for regular operation costs, with approximately one-third of the funding coming from each of the three sources. University, School, and State licensees all show greater dependence on state and local tax monies than either of the other sources. The first-time capital costs' category shows the most agreement among the four ownership groups, with all projecting federal sources as the prime funding source for capital equipment. State, School and University licensees project only 6-8% of capital funds coming from private sources, while Community licensees anticipate almost 25%.

TABLE 12

Cost Categories	Source	%	Funding Mix Over Ownership Group: University	Community	School	State
Regular Operation	Federal		33.96	34.02	30.91	29.88
	State/Local		32.29	33.87	49.09	45.81
	Private		13.75	32.11	20.00	24.31
First-Time Capital	Federal		70.31	58.10	64.09	61.07
	State/Local		21.25	18.10	30.00	30.36
	Private		8.44	23.80	5.91	8.57
Replacement	Federal		44.69	45.38	29.09	36.14
	State/Local		32.50	25.62	53.64	38.00
	Private		22.84	29.00	17.27	25.86

Table 12 - Optimal funding mix from federal, state/local, and private sources according to different licensee types.

Federal sources are also seen as primary for replacement costs by University and Community stations. School and State stations project state and local monies as prime for replacement costs. State stations present the most balanced mix in this category. With the exception of Community stations, private sources are the smallest contributor in the optimal funding mix.

SECTION SIX: PERSONNEL, OPERATIONS, CAPITAL EQUIPMENT AND DEPRECIATION COSTS

In the last section of the questionnaire, respondents were asked to supply total salary costs, a breakdown of non-salary costs according to nine separate departments, total capital equipment costs, and depreciation costs. It should be noted that no University or State licensee, and a very few School System licensees reported depreciation values.

Personnel, Operations, Capital Equipment, and Depreciation Costs - Over All Respondents

For 1976, substantial increases are projected with the largest increase projected for capital equipment costs. The heavy increases under capital equipment to the extent they

represent the expansion of present capacity (not just increased costs) without equivalent increases in salary and non-salary costs are a source of some concern. Stations may be projecting hardware capacity beyond their ability to provide for the operational costs of this increased capacity.

Personnel, Operations, & Capital Equipment Costs 1972 - Over Ownership

Table 13 presents the mean scores for the cost categories of salaries, non-salary, and capital equipment over the four licensee types for 1972 and 1976.

University stations report the smallest total of the three cost values, followed by School System stations, Community stations, and, with the largest budgets, State licensees. In terms of projected 1976 budgets, Community stations estimate the greatest change in over-all budget; School System stations project the least. Both Community and State licensees are projecting astronomical increases in their capital equipment categories. University stations are also projecting large increases in capital equipment expenditures. None of these three shows the desirable concomitant increase in the personnel category which suggests possible imbalance. School System stations, in projecting the least over-all change, also present the most balanced growth pattern. Finally, all four groups project approximately the same growth in the non-salary category, which in the case of the University, Community, and State licnesees--unless they presently have large amounts of unused funds--may not be sufficient for the increased equipment load.

Non-Salary Needs

In the nine general categories of non-salary costs the per cent of the change scores in Table 14 are extremely useful for making statements on future priorities. The relative ranking of the change scores gives a good indication of the areas of the perceived greatest need. University stations rank promotion, development, local production, and personnel training as the major areas of budget growth. Community stations rank promotion, school service, local production and development, as their first four categories. School System stations show personnel training as their leading need, followed by school service, promotion, and local production. State licensees appear to have the most balanced growth projections among the nine categories as the change scores are relatively even. Their top four ratings are personnel training, programming, local production, and technical.

TABLE 13

Ownership	Mean Average			
Personnel, Operation, & Capital Equipment Costs: 1972 $	University	Community	School Dist.	State Licen.
(1) Total Salaries	198447.47	362940.47	424472.64	694096.92
(2) Total Non-Salary	130555.60	297524.42	255849.73	608739.42
(3) Total Capital Equipment	678172.71	970923.17	475644.00	1906472.92
Personnel, Operation & Capital Equipment Costs: 1976				
(1) Total Salaries	380308.79	802236.00	634917.73	832859.18
(2) Total Non-Salary	331164.21	641208.47	552653.64	1475105.27
(3) Total Capital Equipment	1024848.15	1462212.47	853168.27	2501203.82

TABLE 14

Ownership	Mean Average			
Non-Salary Costs: 1976/1972 % of Change	University	Community	School Dist	State Licen
(1) (1) Technical	120.71	115.69	205.18	152.02
(2) Programming	86.97	264.02	75.62	297.78
(3) Local Production	557.31	418.15	252.33	217.07
(4) School Service	123.11	554.13	657.38	139.11
(5) Developmental	812.34	209.79	100.08	113.09
(6) Promotion	10930.15	2687.85	380.78	122.15
(7) Personnel Development	253.87	301.61	3549.64	965.04
(8) General	66.88	67.81	51.91	113.33
(9) Other	146.25	94.79	86.38	41.59

Personnel, Operations, and Capital Equipment Costs 1972, 1976 - Over Market Size

Table 15 illustrates the three cost categories and the three service area groups, and gives the 1972 and 1976 mean cost scores. As has been shown before, market size is related to costs. As market size goes up,so do costs. Major market stations project million dollar expenditures in all three categories for 1976, with the greatest growth occuring in capital equipment.

Personnel, Operations, and Capital Equipment Costs 1972, 1976 - Over Operational Service Time

Table 16 shows the 1972 and 1976 mean scores for the three cost categories and the three service groups. Operational service time is also related to costs. As service goes up, so do costs. The relationship, however, appears to be more curvilinear than linear. That is, the difference between heavy-service stations and moderate-service stations is greater than the difference between moderate-service stations and light-service stations. The relationship, in turn, suggests that, as stations move to greater and greater full-service operation, the need for funds will escalate at a more rapid rate than the resultant increase in service. Heavy-service stations estimate their budget needs for 1976 at almost four million dollars, which is approximately one million dollars more than the moderate-service, and more than two-and-a-half million dollars more than light-service. Part of this difference might be accounted for in the higher estimates of growth projected by the heavy-service stations.

TABLE 15

Market Size

		Mean Average		
Personnel, Operation, & Capital Equipment Costs: 1972	$	Major	Medium	Small
(1) Total Salaries		812328.50	387984.57	207305.21
(2) Total Non-Salary		604633.83	340798.57	138255.92
(3) Total Capital Equipment		1545516.10	988579.00	807433.71
Personnel, Operation, & Capital Equipment Costs: 1976				
(1) Total Salaries		1230022.75	733893.37	313298.70
(2) Total Non-Salary		1090442.75	962429.00	295248.48
(3) Total Capital Equipment		1959806.42	1450222.65	1158227.27

TABLE 16

Operational Times

Personnel, Operation & Capital Equipment Costs: 1972 $	Mean Average Service		
	Light	Moderate	Heavy
(1) Total Salaries	336363.85	357158.08	623414.18
(2) Total Non-Salary	227175.90	295001.81	501541.18
(3) Total Capital Equipment	740218.17	1142905.08	1155326.91
Personnel, Operation & Capital Equipment Costs: 1976			
(1) Total Salaries	632999.43	569645.84	1046997.87
(2) Total Non-Salary	528447.48	632825.68	1356285.44
(3) Total Capital Equipment	1059050.00	1710515.60	1562137.78

SELECTED PROJECTIONS AND CONSTRUCTIONS

As indicated earlier, the purpose of the ETS survey relating to operational characteristics of public broadcast television stations was directed toward identifying facts relevant to their funding requirements.

An examination of even just the selected highlights presented in this summary report reveals both the complexity and risk in making universally applicable projections of cost estimates. Calculations on local production and broadcast costs should be made interrelating licensee (ownership) type, service area (market size), operational budget, operational service time, and available facilities, but such a task is beyond the scope of this study. Also, such a cross-referencing requires more standardized accounting and reporting procedures on the part of the stations. The following calculations, then, using figures from the preceding tables, are done and should be utilized in full recognition that they are based on only the beginnings of the data necessary. The following will help point the way toward the additional information needed, as well as provide useful parameters for estimating costs of full service local television broadcasting.

Projection - Regular Operation Costs

In examining projected regular operation costs for FY 1976 the criterion variable of ownership (licensee type) has been selected for particular treatment since it has been used so frequently in other studies of the enterprise, and - from the results reported in earlier sections - it provides important differentiating detail, rather than simply examining all respondents as a group.

The following calculations and projections are based on information contained in Tables 3, 5, 6, 8, and 12. Table 3 provides information on full service operation times, Table 5 shows local program production needs, Table 6 indicates local program production costs, Table 8 specifies local broadcast costs, and Table 12 provides funding mix estimates.

In projecting total local production costs, the four sample program types are used as the basis for all the locally produced program hours felt to be necessary by the respondents, since each specific program type was not costed out. Specifically, the projections in this section are based on the following assumptions as a minimum level for local production.

1. All classroom instruction estimates use the 32-program (one-half hour each) rate.

2. An average of one documentary per month is produced, which may be done in any program category, except classroom instruction.

3. An average of two remote production programs are originated per week, which may be done in any program category, except classroom instruction.

4. All other local production is calculated at the in-studio rate.

5. All calculations are based on projected "full service" operation estimates.

6. An average of "tape plus interconnect" and "tape plus film play" is used for tape/film hourly costs.

The following calculations show the average annual regular operation cost for a single station for each licensee type for the local production and broadcast services indicated.

University Licensees - Annual Costs

A. Local Program Production

1. Classroom instruction 114 hours at $2,000 per hour	$ 228,000
2. Documentary 12 half hour programs at $4,018 per half hour	$ 48,216
3. Remote Coverage 93 hours at $1,114	$ 103,602
4. In-Studio 529 hours at $262	$ 138,598
Local Program Production Sub-Total	$ 518,416

B. Broadcast Costs

1. Total: transmitter only for local production - 742 hours at $76.79	$ 56,978
2. Total: tape/film and transmitter 2421 hours at $102 per hour average	$ 246,942
3. Total: interconnect and transmitter 2306 hours at $140.64	$ 324,316
Broadcast Costs Sub-Total	$ 628,236
Total Local Production & Broadcast Costs per Licensee	$1,146,652

C. Optimal Funding Mix - Regular Operation Only

	Federal (33.96%)	State/Local (52.29%)	Private (13.75%)
Local	$176,054	$271,080	$ 71,282
Broadcast	$213,349	$328,504	$ 86,382
Total	$389,403	$599,584	$157,664

Community Licensees

A. Local Program Production

1. Classroom instruction 366 hours at $2,930 per hour	$1,072,380
2. Documentary 12 half hour programs at $14,826 per half hour	$ 177,912
3. Remote Coverage 99 hours at $2,408	$ 238,392
4. In-Studio 818 hours at $2,408	$ 598,776
Local Program Production Sub-Total	$2,087,460

B. Broadcast Costs

1. Total: transmitter for local production - 1238 hours at $144	$ 184,752
2. Total: tape/film and transmitter 2488 hours at $242 per hour average	$ 602,096
3. Total: interconnect and transmitter 2772 hours at $228 per hour	$ 632,016
Broadcast Costs Sub-Total	$1,418,864
Total Local Production & Broadcast Costs per Licensee	$3,506,324

C. Optimal Funding Mix - Regular Operation Only

	Federal (34.02%)	State/Local (33.87%)	Private (32.11%)
Local	$ 710,154	$ 707,023	$ 670,283
Broadcast	$ 482,698	$ 480,569	$ 455,597
Total	$1,192,852	$1,187,592	$1,125,880

School Licensees

A. Local Program Production

1. Classroom instruction 642 hours at $1,864 per hour	$1,196,688
2. Documentary 12 half hour programs at $3,349 per half hour	$ 40,188
3. Remote Coverage 93 hours at $7,880	$ 732,840
4. In-Studio 725 hours at $1,603	$1,162,175
Local Program Production Sub-Total	$3,131,891

B. Broadcast Costs

1. Total: transmitter for local production - 1,466 hours at $138.50	$ 203,041
2. Total: tape/film and transmitter 1,645 hours at $164 per hour	$ 269,780
3. Total: interconnect and transmitter 2,032 hours at $644 per hour	$1,308,608
Broadcast Costs Sub-Total	$1,781,429
Total Local Production & Broadcast Costs per Licensee	$4,913,320

C. Optimal Funding Mix - Regular Operation Only

	Federal (30.91%)	State/Local (49.09%)	Private (20.00%)
Local	$ 968,068	$1,537,445	$626,378
Broadcast	$ 550,640	$ 874,503	$356,286
Total	$1,518,708	$2,411,948	$982,664

State Licensees

A. Local Program Production

1. Classroom instruction 671 hours at $8 260 per hour	$5,542,460
2. Documentary 12 half hour programs at $25,860 per half hour	$ 310,320
3. Remote Coverage 97 hours at $5,235	$ 507,795
4. In-Studio 978 hours at $1,884	$1,842,552
Local Program Production Sub-Total	$8,203,127

B. Broadcast Costs

1. Total: transmitter for local production - 1752 hours at $155 per hour	$ 271,560
2. Total: tape/film and transmitter 2915 hours at $195 per hour	$ 568,425
3. Total: interconnect and transmitter 2007 hours at $199 per hour	$ 399,393
Broadcast Costs Sub-Total	$1,239,378
Total Local Production & Broadcast Costs per Licensee	$9,442,505

C. Optimal Funding Mix - Regular Operation Only

	Federal (29.88%)	State/Local (45.81%)	Private (24.31%)
Local	$2,452,094	$3,757,852	$1,994,180
Broadcast	$ 370,326	$ 567,759	$ 301,293
Total	$2,821,420	$4,325,611	$2,295,473

University licensees are the only one of the four groups where broadcast costs exceed local production costs, at a ratio of 5/6. For Community licensees the ratio of local production costs to broadcast costs is 7/4, for School licensees the ratio is 5/3, and for State licensees the ratio is 7/1. The latter is due primarily to a large expenditure for classroom instruction.

To arrive at the total annual regular operation costs for all public television stations the following calculations were made: first, on the assupmtion that the 133 licensees surveyed would be operating in FY 1976, and that no additional stations would be activated, and second, projecting a 50% increase to 200 licensees in FY 76 with a similar breakdown in ownership types.

	Licensee Types $ (000)				
	University (46)	Community (48)	School (19)	State (20)	Total (133)
Local Production	23,847	100,198	59,506	164,063	344,614
Broadcast	28,899	68,105	33,847	24,788	155,639
Total	52,746	168,303	93,353	188,851	500,253

	University (69)	Community (72)	School (29)	State (30)	Total (200)
Local Production	35,771	150,297	90,825	246,094	522,987
Broadcast	43,348	102,158	51,662	37,181	234,349
Total	79,119	252,455	142,487	283,275	757,336

Optimal funding mix estimates for regular operation costs, based on the projection of 200 licensees in FY 76, would be as follows:

$ (000)

	Federal	State/Local	Private
University (69)			
Local Production	12,148	18,704	4,919
Broadcast	14,721	22,667	5,960
Total	26,869	41,371	10,879
Community (72)			
Local Production	51,131	50,906	48,260
Broadcast	34,754	34,601	32,803
Total	85,885	85,507	81,063
School (29)			
Local Production	28,074	44,586	18,165
Broadcast	15,969	25,361	10,332
Total	44,043	69,947	28,497
State (30)			
Local Production	73,533	112,736	59,825
Broadcast	11,110	17,032	9,039
Total	84,643	129,768	68,864
Total (200)			
Local Production	164,886	226,932	131,169
Broadcast	76,544	99,661	58,134
Total	241,440	326,593	189,303

Combined local production and broadcast cost projections suggest more than $750 million in annual expenditures, of which more than $240 million is federal funds, more than $320 million is state/local tax support and almost $190 million is from the private sector.

Total annual regular operation costs of almost $235 million for broadcast only are less than half of the projected production costs of more than $520 million. This projection is especially noteworthy in the light that such programming is only about one quarter of full service operation time, and the indications that such operational costs may have been underestimated when analyzed against projected capital expenditures.

Projection - Capital Costs

The following calculations show the average first-time capital costs for a single station by both licensee type and service area (market size). Growth projections by market size are limited by definition, i.e., there can be only 25 stations in the 25 largest service areas, and such projections can serve as a cross-check against ownership projections.

	Service Area (Market Size)			
$ (000)	Large (25)	Medium (75)	Small (100)	Total (200)
Capital	48,995	108,767	115,823	273,585

	Licensee Type (Ownership)				
$ (000)	University (69)	Community (72)	School (29)	State (30)	Total (200)
Capital	70,714	105,279	24,742	75,036	275,771
Funding Mix					
Federal	49,719	61,167	15,857	45,824	172,567
State/Local	15,027	19,055	7,423	22,781	64,286
Private	5,968	25,057	1,462	6,431	38,918

Capital cost projections are remarkably similar when calculated by both licensee type and service area, totalling about $275 million. Of the total, more than $170 million is projected in federal funds, about $65 million in state/local support and almost $40 million from the private sector.

Summary

The selected projections for local station expenditures indicate that for FY 76 first-time capital cost estimates are approximately $275 million. The total annual costs for a local broadcast full service schedule is almost $235 million, plus more than $520 million for local production. The category "instructional programs for classrooms" accounts for almost half the cost of the total for all types of local production.

It should be noted again that survey respondents were requested to calculate program production costs on the basis of the programming style required for their service area. No attempt was made to specifically gauge the quality or effectiveness of such local programming in this study.

RESULTS AND CONCLUSIONS

Public television stations present a complex picture of sometimes interacting, sometimes competitive, aims, roles, and resultant needs. Each licensee is a separate entity, with requirements fashioned from the unique mix of goal and mission characteristics which are its own. This has been said before, but never with such forceful documentation. With such diversity of purpose and need, categorical funding, applied with little flexibility for local option, would appear to be ruinously inefficient.

Ironically, the diversity of public television, which is truly a boon to its many publics, is an impediment to its full development. It is an impediment because diverse purposes are often perceived as competitive purposes. This perception often results in the management of information for specific activities and creates sporadic areas of growth, rather than integrated planned overall development.

ALL RESPONDENTS

The following results and conclusions seem warrented in an overall look at information from all respondents.

The projected average "full service" schedule for FY 1976 is 48 weeks per year, 7 days per week, and 16 hours per day.

The basic mechanical sources for programs indicate a mix of approxiamtely 20% local production, 40% from tape and film use, and 40% from "real time" interconnection, based on 26½ hours per week of local production, 50 hours per week of tape/film, and 49 hours per week of both regional and national "real time" interconnection.

Locally produced programs show almost 50% for classroom and non-classroom instruction, approximately 20% for news and public affairs, more than 20% for cultural and children's programs with in-service professional training and other programs making up the balance.

Local production costs range from $1,000 per hour for basic in-studio production to $1,800 per program for in-school instructional programming to $3,700 for remote coverage of a public event to $12,000 per program for an in-depth social issue documentary. Estimates of quality and effectiveness were not specifically requested to be included as a part of the costing procedures.

Sources of income and the percentage mix of such funds shows the following breakdown:

For local production and regular broadcast operation, the percentages of federal funds, state/local tax sources and private monies is 32.5%, 44% and 23.5% respectively. For first-time capital costs, the federal share is projected at 63%, with approximately 24% from state/local and 13% from private funds. For replacement capital the projections are 40%, 35% and 25% respectively.

Considerably more definition and insight into all of the above information is provided by examining the data across a variety of control variables, such as licensee type, service area and operational characteristics.

LICENSEE TYPE (OWNERSHIP)

Ownership plays an important part in both the definition and operation of public broadcast stations. Different licensee types show various program source mixes, program types, and a variety of cost characteristics.

University stations project broadcast emphasis on public affairs and cultural locally produced programming.

State stations place their emphasis on classroom and non-classroom instruction.

School System stations show an emphasis on child-directed instructional programming.

Community stations, perhaps because of their greater dependence on generated revenue, have projected a programming combination with a broader audience base, with emphasis on classroom instruction and public affairs programming.

Stations related to academic institutions are less likely to provide year-round, 7 day per week, full service operation, either currently or in their projections for the future. It is likely that such stations would have special costs attached to a full service schedule, and funding specific to this problem may be necessary.

The particularly low cost estimates provided by University stations as a group signal them for special considerations. Of all possible explanations for these estimates, the most likely appears to be that such stations have not developed accounting procedures which fully recognize the contribution of the parent institution.

SERVICE AREA (Market Size)

Stations in larger markets have costs which are specific to their location. These location-specific costs mean that, in terms of cost efficiency, large market stations will be less productive per dollar of funding than stations in smaller markets. In addition, the projected rates of change are such that large market stations will decline further in cost efficiency, relative to smaller market stations, on a per-program basis. Additional analyses would seem to be called for to examine costs on a per-viewer basis.

TOTAL OPERATIONAL BUDGET

Perhaps the most important finding for this control variable is the initial support for the existence of a critical funding point relevant to local production. Only the highest-budgeted stations show a substantially greater number of local production hours. One can speculate, then, that the demands of local production are such that a

relatively high level of funding is required before a substantial program of production can begin. Gradual increases in funding will not result in gradual increases in local production. Consequently, funding for production, to have any effect on the output of average public television stations, will have to be massive. In the absence of massive funding, accountability procedures based on local program production are meaningless.

OPERATIONAL SERVICE TIME AND AVAILABLE FACILITIES

Operational service time and available facilities are both directly related to cost factors. As service increases or as capacity increases, the cost for the same unit of time or product also increases. These relationships exemplify the need for a systems approach to funding. That is to say, that funding adapted to a single area only is dysfunctional to the other areas of the same operation. Funding applied to capital equipment, for example, must also include funding for personnel and non-salary costs, if the equipment funding is to be efficient in terms of productivity. This requirement for a systems approach is particularly important when the sources of funding are varied and independent, as is the case of public broadcasting.

SELECTED PROJECTIONS

The selected projections in this report are based on a survey of local stations and represent estimated costs to local stations; they do not include national or regional program production or distribution costs which are not borne by the stations. Such costs should be viewed as being in addition to the individual licensee costs reflected in this report.

With projected annual local production costs in excess of $520 million and local broadcast costs of almost $235 million added to national and regional services, the total annual cost for full schedule public television service can readily require more than a billion dollars annually.

Many questions can be raised concerning the lack of uniformity in accounting and costing procedures from one licensee to another, but there can be no doubt about the commitment to provide a meaningful balanced full range of local, regional and national program services to each of the communities served by public television. This study has added invaluable information to help define the elements and magnitude of the task which still remains to be done.